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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/560,359

12/12/2005

Seiichi Otani

21398-00036-US1

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04/03/2008

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EXAMINER

CYGAN, MICHAEL T

ART UNIT

PAPER NUMBER

2855

MAIL DATE

DELIVERY MODE

04/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/560,359 | Applicant(s) OTANI ET AL. | |
| | Examiner Michael Cygan | Art Unit 2855 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 11-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Castillo (US 6,019,946) in view of the Derwent abstract for JP 03172749 A ('749). Castillo teaches a combustion-type gas sensor comprised of a gas detection element [24a] enclosed in a case [18,24] (Figure 12), comprising an induction portion made of an oxidation catalyst powder (Catalyst A, comprising Pt) and an insulating powder (e.g., frit and vehicle) fixed to a Joule heater (column 15 lines 32-34; column 16 lines 15-49), where the catalyst-coated sensor is aged by the internally heated sensor (see, e.g.,

column 8 lines 48-50); see column 10 line 65 through column 11 line 60; see also column 15 lines 5-55. Castillo teaches the claimed invention except for a silicon film formed on the sensor. '749 teaches coating a silicon layer on a catalyst-coated metal oxide semiconductor sensor; see abstract. It would have been obvious to use a silicon coating as taught by '749 in the invention taught by Castillo to form the sensor, since '749 teaches that this reduces poisoning of the catalyst. Note that processes of use, as per limitations in claims 8 and 9, are not given patentable weight in a product-by process claim. With respect to claim 7, the source of the heat for the aging process is only given patentable weight to the extent that the structure resulting from the process is dependent on a particular heat source; the specification gives no indication of a heat source-dependent resulting structure.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Castillo (US 6,019,946) in view of the Derwent abstract for JP 03172749 A ('749), further in view of Murphy (US 5,964,089). Castillo teaches the claimed invention except for use in a fuel cell gas outlet. Murphy teaches the use of Pt-catalytic hydrogen gas sensors in the exhaust of an electrolytic fuel cell vehicle (column 24 lines 20-29). It would have been obvious to use an electrolytic fuel cell vehicle as the gas source as taught by Murphy since this would advantageously extend the capabilities and usefulness of the gas sensor of Castillo.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Castillo (US 6,019,946) in view of the Derwent abstract for JP 03172749 A ('749), further in view of Moseley "Solid State Gas Sensors". Castillo teaches the claimed invention except for the induction portion comprising an interior insulating body and an exterior catalytic body. Moseley teaches the formation of a pellistor gas sensor by depositing an insulator member from a slurry followed by an overcoating of a catalytic member from a slurry; see page 20. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the induction portion comprising an interior insulating body and an exterior catalytic body as taught by Moseley in the invention taught by Castillo, since Moseley teaches that such a structure for standard pellistor gas sensors, and would be advantageous due to its known utility and properties.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Cygan/
Primary Examiner, Art Unit 2855